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ABSTRACT

Five papers summarize the development of the Elementary Communication Skills Programs in reading, composition, spelling, and expressive language, as well as the training system designed to accompany each program. These programs are intended for use in kindergarten through grade 4. Product development, field tryouts, revisions, and results for the period 1966-1974 are presented chronologically for each of the programs. (AA)

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DEVELOPMENT OF THE SWRL/GINN ELEMENTARY COMMUNICATION SKILLS PROGRAMS: SUMMARY CHRONOLOGY

SWRL Education Research and Development
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ED202828

CONTENTS

	Page
PREFACE	v
READING PROGRAM Roger O. Scott, Masahito Okada, and Ronald Besel	1
COMPOSITION PROGRAM Fred C. Niedermeyer	17
SPELLING PROGRAM Bruce A. Cronnell	31
EXPRESSIVE LANGUAGE PROGRAM Fred C. Niedermeyer	37
TRAINING/INSTALLATION SYSTEM Michael H. Monerief	47

3

PREFACE

In the aggregate, the five papers presented here constitute a chronological summary of the development of the Elementary Communication Skills Programs: Reading, Composition, Spelling, and Expressive Language. The first four papers address development of the instructional systems, while the last paper describes SWRL's formal treatment of training and installation.

The Elementary Communication Skills Programs are products of SWRL R&D designed to provide research-based, quality-verified resources for use by schools in reliably accomplishing significant instructional outcomes. The sustained inquiry from 1966-1974 to develop the Programs involved the cooperative collaboration of the Office of Education and the National Institute of Education in sponsoring the R&D, and of large numbers of pupils, school personnel, and parents in providing the feedback basic to the development endeavor. These contributions to the R&D were essential for its success and the professional assistance of these participants is gratefully acknowledged.

The papers focus on the Elementary Programs of the Communication Skills Programs. The Elementary Programs are for use in the schools' operating range kindergarten through grade 4. The Advanced Communication Skills Programs are for use in the grades 4-6 operating range, dovetailing with the Elementary Programs. The Intermediate Communication Skills Programs are for use with pupils whose age and grade suggest readiness for entry into the Advanced Programs, but whose skills' proficiencies point to identifiable gaps. The development history of these two sets of programs will be presented in later historical summaries.

As history is being written, history is being made. This is certainly so with the Elementary Communication Skills Programs. Empirical data related to their use during 1974-75 and in subsequent years will be treated in reports to come.

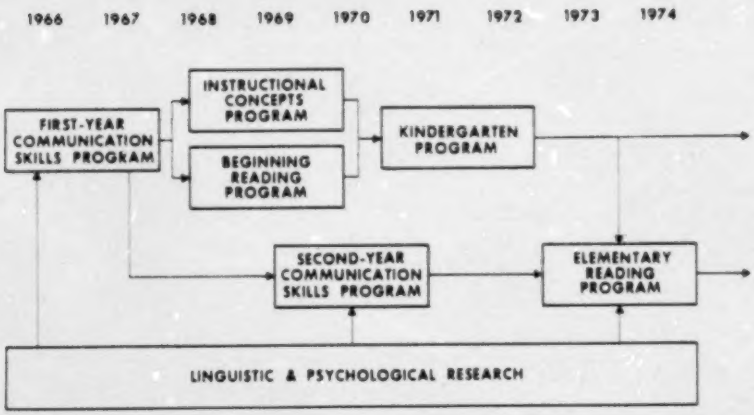
READING PROGRAM

Roger O. Scott, Masahito Okada, and Ronald Besel

The documentation of the programmatic R&D from which the SWRL Reading Program derives is recorded in more than 100 SWRL technical publications and journal articles. The inquiry involved a wide range of analytic and empirical investigations designed to reduce the uncertainty associated with the production of effective and economical resources for reliable instruction in reading.

This paper overviews the repeated cycles of classroom testing and revision of program materials and procedures. The classroom verification took three distinct forms: (1) Beginning in 1966, testing of the First-Year Communication Skills Program designed for kindergarten classes. This inquiry provided an opportunity to explore various facets of beginning reading instruction; (2) Testing the Second-Year Communication Skills Program, primarily in first-grade classes. This inquiry provided an opportunity to explore various facets of instruction to extend initial reading proficiency; (3) Testing the present Reading Program in K-4 classrooms. The Reading Program incorporates the findings of the First-Year and Second-Year Communication Skills Programs but includes new material based upon the linguistic and psychological research that was being conducted concurrently with but independent of the classroom verification tryouts. The figure on the next page shows these relationships.

Testing began with a few classrooms. Succeeding tryouts involved additional pupils, teachers, and school districts. The basic axiom of this strategy was to first determine the efficacy of



materials and procedures under closely monitored conditions. As materials and procedures were verified, the tryout was enlarged and the reliability with an increasingly broad range of operating conditions was tested.

Three types of data were of major import. Chief among these were the test results indicating the extent to which students displayed high levels of proficiency on the program outcomes. Obviously, modifications were called for when significant numbers of students failed to attain the skills being taught. This was particularly vital since the Reading Program incorporated a carefully controlled sequence of skills, each building upon, or using as a context, previously taught skills. A second data source was the field report – reactions of pupils, teachers, principals, and parents. These data were largely collected through questionnaires. They were used to evaluate the appeal of various aspects of the program (a "desire to use" indicator) and as a source of ideas for modifications in materials and procedures. In the early stages of classroom verification, field reports were often supplemented by SWRL staff observations of learning activities and by interviews with teachers and pupils. Third, revisions were made on the basis of results from continuing SWRL research apart from the verification tryouts.

The First-Year Communication Skills Program Tryouts

The initial phase of the Reading Program's classroom verification process involved the development of the First-Year Communication Skills Program (FYCSP). This program, primarily intended for kindergarten children, had four major outcomes:

Words:	A sight-reading vocabulary of approximately 100 words
Word Elements:	The ability to read 23 selected initial and ending sounds
Word Attack:	The ability to sound out and read any one-syllable word composed of word elements from the program
Letter Names:	The ability to name each letter of the alphabet, when shown the printed letter

A series of field tryouts were conducted for the purpose of identifying improvements that were subsequently incorporated into the program. Data were systematically collected during each tryout through use of questionnaires, classroom observations, meetings with tryout teachers, and through mid-year and end-of-year assessments of pupil performance. A summary of these tryouts is presented in Table 1. Not included in the table are (1) the research studies conducted by SWRL in addition to the classroom tryouts to obtain information for use in development of FYCSP, and (2) the tryouts of many prototype materials conducted at SWRL.

The result of the 1966-67 series of short tryouts was the identification and refinement of the most effective prototype materials for incorporation into the 1967-68 tryout of the year-long program. In 1967-68, the major focus was upon improvement of the instructional program in order to obtain acceptable pupil achievement on each program outcome. When, in these tryouts, the effectiveness of the program was demonstrated with prescribed teaching procedures, the emphasis shifted to the testing and improvement of a teacher-training system. The

Table 1

Summary of FYCSP Classroom Tryouts

School Year	Tryout Length	No. of Pupils	Major Purpose of Tryout
1966-67	Varied from 6-18 weeks	400	Identify effective prototype materials and procedures
1967-68	School Year	600	Improve instructional system
1968-69	School Year	2,300	Couple with training system
1969-70	School Year	2,600	Couple with installation system
1970-71	School Year	35,000	Couple with quality assurance system
1971-72	School Year	72,000	Integrate all systems

goal was to enable school district personnel to train teachers in the classroom behaviors judged necessary to yield acceptable pupil achievement in their classes. Thus, in the tryout sequence, the focus changed from the student to the teacher, from individual skill development to effectiveness of exportable personnel training installation materials for teachers, principals and district administrators. This was a major determinant in the increasing size of successive tryouts. In the final tryout cycles, reliable data requirements necessitated information on many classrooms in a variety of school districts.

The field tryouts of FYCSP led to the identification and incorporation of a large number of revisions into the program. A series of modifications in materials was made in order to increase student proficiency on selected outcomes. When tryout data indicated deviations between actual and intended procedures in use of the program, the deviations that were effective were then made a part of the regular program. Otherwise, revisions were

made in an effort to prevent the ineffective procedures.

The results of the FYCSP tryouts are reported in a series of SWRL documents. Representative reports include Sullivan and Majer (1970); Hanson, Bailey, Kaplan, and Yaman (1970); and, Resta and Hanson (1971). Other documents report on the effectiveness of SWRL-developed support programs used in conjunction with the FYCSP. These programs and representative documentation include the Summer Reading Program (Sullivan & Labeaune, 1969), the Tutorial Program (Niedermeyer & Ellis, 1970), the Instructional Concepts Program (Scott, 1971a), and the Parent-Assisted Learning Program (Niedermeyer, 1969).

The Second-Year Communication Skills Program Tryouts

The initial tryout of the Second-Year Communication Skills Program (SYCSP) took place in the 1968-69 school year, two years after FYCSP tryouts had begun. SYCSP consisted of two components: a "Transition Program" for first-grade children who had not participated in the FYCSP, and the "Second Year Program" for first-grade children who had completed either the FYCSP or the Transition Program. Research uncertainties focused upon procedures for implementing an expanded set of instructional outcomes, entering advanced modules of a multi-level program, and maintaining a prescribed pace of instructional activities. Because questions involving teacher training in the context of a widely disseminated program were being answered with the FYCSP tryouts, the number of classrooms in SYCSP tryouts was kept at a relatively small number—three classes in 1968-69, 60 in 1969-1970, and 115 in 1970-71. Pupil performance data and teacher reactions led to a series of program revisions after each of the first two tryouts.

Data on the SYCSP tryouts are reported in Labeaune and Sullivan (1969); Flores and Niedermeyer (1970); and Scott (1971b).

SWRL Reading Program Tryouts

The tryouts of FYCSP and SYCSP had indicated the types of

materials and procedures that were likely to be effective for beginning reading instruction, with particular emphasis on decoding proficiency. Tryouts had also defined program characteristics that were accepted by teachers and motivating to children. A completely new phonics sequence and the words that were appropriate exemplars for each point of this sequence had been defined through SWRL's linguistic research. Ongoing analytical inquiry had identified comprehension outcomes to complement the structure of decoding skills. The development effort for the new reading program required a synthesis of the information from all of these sources. It should be pointed out that not all of the information was available at the time the preparation of materials began. Final FYCSP and SYCSP tryouts were not completed until after the new phonics sequence and lexicon had been described. Research on comprehension and word attack provided input throughout the development process. Finally, the development of the earlier programs had shaped the product development process itself. The original conceptualization was a set of instructional tasks, all of which had to be completed according to a predefined sequence. By the time the new Reading Program began to be developed, the instructional architecture was seen as a system with continuing, interrelated inputs and task sequences that change as a function of information needs. Thus, the new program was a result not only of new information, but of a new, more complex, and more efficient instructional architecture.

Classroom tryouts of the first seven blocks of the Reading Program were begun in the fall of 1973. Block 8 was added to the tryout the following spring. The tryout involved more than 12,000 children in 8 school districts. Major areas of uncertainty that the tryout was designed to reduce are summarized in Table 2.

Tryout Data. Tryout data were collected at the district, teacher, and pupil level. School district supervisory personnel responsible for the implementation of the program made

Table 2

Areas of Uncertainty – 1973-74 Tryout

- materials and procedures for teaching . . .
  1. comprehension skills
  2. decoding polysyllabic words
  3. reading outcomes in the context of library and study skill activities
- materials and procedures for placement and initial instruction in advanced blocks
- materials for assessment of . . .
  1. comprehension outcomes
  2. decoding by means of faceted test items
- teacher training with reference to . . .
  1. teaching more than one block within a single classroom
  2. teaching a SWRL Communication Skills Program in addition to the Reading Program
  3. information requirements for switching from another reading program to an advanced level of the SWRL Program
- ordering, organizing, and accessing Program materials
- district information requirements for adopting a multi-level reading program

frequent reports to SWRL. Information from teachers was collected through questionnaires and meetings conducted by

SWRL staff. Additionally, teacher reactions were relayed to SWRL by the district supervisory personnel.

Pupil performance data were collected in connection with the development of the Quality Assurance system for the Program. Participating schools sent to SWRL, on a regular basis throughout the school year, all Criterion Exercises (CE's) completed by children in the program. There are 40 of these assessment instruments in the program, one for each unit of instruction. Because the CE is a diagnostic mechanism designed to help the teacher identify pupils who need more instruction on given unit outcomes, CE scores are likely to underestimate the effectiveness of the instruction. Nevertheless, the scores were useful in (1) determining those outcomes and units that were particularly difficult for some pupils and (2) making an analysis of error patterns to indicate relative difficulty of content within the word recognition outcomes. An important feature of the CE data was its availability early in the school year. An updated, cumulative data printout was prepared each month and most areas of difficulty and error patterns were visible early in the reporting process. This meant that appropriate revisions could be planned well before the school year ended.

The CE data for the 1973-74 tryout are summarized in Table 3. The most striking feature of these data is the general pattern of high scores. Aside from this, several aspects of the scores require comment. One of these is the fact that comprehension scores in Blocks 1 and 2 are not as high as scores in some of the other outcomes areas. This was due, in part, to vocabulary limitations (children could miss an item because they could not read a word) and, in part, to an item format that required modification. Performance on the outcome "Letter Sounds and Blending" tends to be lower than scores on "Program Words." This is because the content consists of words that have *not* been included in the instructional materials. Program Words are those that *have* been practiced in the course of a unit's instructional activities. SWRL research has consistently shown this level of relative difficulty between the two tasks.

Table 3

Mean Percent Correct Responses on Criterion Exercise Items 1973-74 Tryout

Block	1					2					3						4					
Unit	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	6	1	2	3	4	5	6
Outcome																						
Letter Names	96	95	90	93	97	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Program Words	84	93	94	87	86	93	89	93	91	95	90	91	94	94	92	94	93	95	97	92	93	95
Letter Sounds and Blending	–	–	–	64	58	78	75	77	85	84	82	82	77	77	86	82	87	83	88	90	83	82
Comprehension	63	73	76	76	67	75	79	77	81	78	77	75	78	83	85	83	91	88	84	89	91	89

Block	5					6					7				8			
Unit	1	2	3	4	5	1	2	3	4	5	1	2	3	4	1	2	3	4
Outcome																		
Program Words	93	91	92	94	95	96	93	95	95	95	94	87	92	92	97	95	92	95
Vocabulary Extension	84	81	87	86	91	90	81	89	78	85	87	92	93	87	85	78	88	90
Comprehension	78	70	88	89	92	93	90	93	96	92	93	92	97	82	90	76	82	79

Note: The number of pupils tested in each unit varied. Ranges for each block are as follows:

Block	N	Block	N	Block	N	Block	N
1	252–358	3	442–552	5	296–339	7	330–386
2	422–498	4	377–458	6	246–369	8	44–193

A second source of pupil performance data was the set of end-of-year tests which were given to all schools participating in the Quality Assurance Program. These provide (1) a reliability check on the pattern of CE scores and (2) an indication of outcome proficiency *after* a year-long period of instruction. A summarization of the performance is presented in Table 4. Scores are based upon those children who completed all of the units in a given block. Sample test items for end-of-year tests and CE's are shown in the Appendix.

Table 4

Percent of Correct Responses on
End-of-Year Test Items
1973-74 Tryout

Block	1	2	3	4	5	6	7	8
Outcome								
				Percent				
Letter Names	89	–	–	–	–	–	–	–
Program Words	81	86	86	95	93	92	95	96
Letter Sounds and Blending	61	76	80	89	–	–	–	–
Vocabulary Extension	–	–	–	–	81	83	90	87
Comprehension	56	63	70	76	82	68	78	74
Number of Pupils Tested	342	437	439	581	302	262	310	190

The most important conclusion that can be drawn from the end-of-year data is that there is a high degree of proficiency on most program outcomes. Low scores on decoding (letter sounds

and blending) and comprehension in early blocks are followed by higher scores. This indicates that some children will have initial difficulties in these areas and that they will have a higher level of skill attainment after they have progressed through more than one block of instruction or, in the case of comprehension, after they have mastered additional word recognition skills. It should also be noted that these data incorporate program "bugs" identified in materials and procedures during the tryout and may thus be viewed as lower-bound indicators of the program's effectiveness.

Revisions on the Basis of 1973-74 Tryout. Although modifications were made in all aspects of the program, the most significant changes occurred in the "areas of uncertainty" listed in Table 2. The most extensive of these were in comprehension instruction. Most of the existing activities were rewritten and, for Blocks 5-8, a large number of outcomes and corresponding instructional activities added. In many instances, instruction on other outcomes was also rewritten and/or supplemented. This was usually in response to data indicating that pupils were having difficulty with instruction at a given point in the program (for instance, at the beginning of a given block), or that pupils were finding some subject matter particularly difficult (for instance, a particular spelling-to-sound correspondence in certain word environments). Materials were also changed when data indicated that they were confusing or misinterpreted. This occurred with some teacher directions and some pupil item formats. Other changes were made when it became clear that the balance in sex role descriptions and ethnic representation could be improved. An analysis of Criterion Exercise data and the editing of these assessment instruments identified a number of items in need of revision. Included were ambiguous and misprinted items and items measuring skills other than what were intended.

One step removed from the program's pupil materials, teacher training, program packaging, and materials distribution systems were evaluated and, when necessary, revised. When there were

requests for program information from districts, schools, or teachers, materials were prepared, distributed, and further modified for future versions of the program.

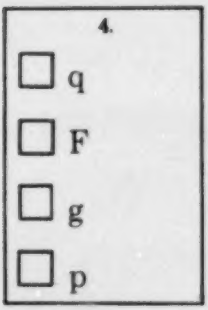
Because the SWRL Reading Program is based upon an explicit proficiency structure and because it is composed of a set of organized and interrelated materials, revisions often necessitated many further modifications. Thus, one of the final series of revision tasks was a comprehensive cross-checking and analysis of all changes. This ensured that all components would be consistent, not only with respect to program specifications, but in terminology and formats as well.

APPENDIX

Sample Items Used on Criterion
Exercises And End-of-Year Tests

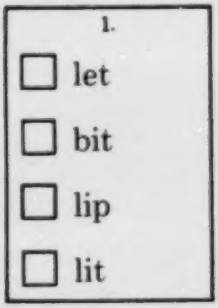
BLOCK 1 – 4 OUTCOMES

- Letter Names



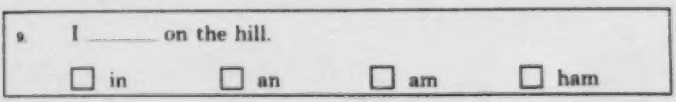
Pupils mark the letter read by the teacher

- Program Words, Letter Sounds & Blending



Pupils mark the word read by the teacher.

- Comprehension



Pupils read the item and "mark the box next to the word that should go in the blank."

BLOCK 5 – 8 OUTCOMES

- Program Words, Vocabulary Extension

> **43.** Will you please _____ me?
>
> assistant
> assist
> assistance
> assisting

Pupils read the item and "circle the word that fits."

- Comprehension

7

It was a hot June day. Grandfather Green picked up a bowl of fruit and took it outside into the shade of a big tree.

"This fruit was in the icebox," said grandfather to his grandson, Mark. "It should be nice and cool."

After setting down the bowl, grandfather headed back inside.

"Now don't eat that fruit till I return," he said. "I'll get us something to drink."

When grandfather returned a short time later, he noticed that a strawberry was missing.

"Mark! You're in big trouble!" he shouted. "I told you not to eat any fruit."

Mark didn't know what to think. Then, he noticed a bird with red wings in the tree above the bowl.

"I see what happened," said Mark. "Look in the tree. There's your robber."

Grandfather looked up in the tree, and smiled. Mark was right. There, high above, sat a big, red bird with an even bigger strawberry sticking out of his mouth.

"Crime solved!" said Grandfather. "Now come on, let's eat the rest of this fruit before our friend gets any more."

1. It was a day in _____.
   a. March
   b. June
   c. February
   d. January

2. Grandfather's name was _____.
   a. Mr. Green
   b. Mr. Bedford
   c. Mr. Mark
   d. The story doesn't say.

3. How do you think the bird got the strawberry?
   a. Mark gave it to him.
   b. Grandfather gave it to him.
   c. Karen threw it to him.
   d. It flew down and picked it up.

4. In the story, rest means _____.
   a. the fruit that is left
   b. the skin of the fruit
   c. sitting down for a while
   d. a kind of strawberry

Pupils read the story and "circle the letter beside the best answer to each question."

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COMPOSITION PROGRAM

Fred C. Niedermeyer

The program verification of the instructional system for the Composition Program dealt with four general aspects of uncertainty: (1) program placement calibration (status testing), (2) handwriting acquisition (Blocks 1 and 2), (3) initial proficiency in composition (Blocks 3 and 4), and (4) comprehensive proficiency in composition rudiments. These areas are described below.

Tryout data are presented in summary form. Those interested in seeing the complete data or in examining in detail the procedures and materials used in the tryouts will want to refer to the journal articles and SWRL papers referenced throughout.

Status Testing

To aid in the formulation and development of the K-3 Composition Program, status testing was conducted during the fall of 1971, (Quellmalz, Niedermeyer, & Trithart, 1973). A set of items reflecting what were then the tentative outcomes of the program was administered to a sample of 960 non-program children in four schools. These schools represented a wide range of school locations and neighborhoods. The status testing was conducted to obtain baseline data on what writing tasks children could not do at various ages and grade levels. The results of the testing were then used to assist developers in determining such things as which outcomes should be taught at various levels of the program, how outcomes should be sequenced, which outcomes were unnecessary, and whether the need for additional outcomes was apparent.

The results of the status testing revealed several things. First, it was apparent kindergarten children needed handwriting instruction. Also, first-grade children seemed to require instruction on most routine editing skills as coherency, word spacing, capitalization and punctuation. The study indicated the importance of developing fluency in first graders so that they could write enough to profit in second and third grade from instruction related to planning and writing compositions for a variety of purposes. The data suggested that unless systematic instruction and practice occurred to help children compose and organize the substance of their writing (i.e., not just punctuation instruction), the overall communicative quality of their efforts would remain relatively low.

Blocks 1 and 2

Development of the handwriting component of the Composition Program began in 1971 with an experimental study designed to reduce uncertainty concerning the most effective type of instructional materials (Hirsch & Niedermeyer, 1973). The study found that kindergarten children learned better when tracing a dotted representation of an entire letter and then writing the entire letter on their own, than when initially tracing the entire letter and starting to write parts of the letter independently as "dots" were gradually "faded" or removed. The study also found that training children to visually discriminate well-formed from poorly formed letters had no effect on actual letter writing performance.

The results of the above study helped form the basis for an abbreviated classroom version of the program, which was tested during the Spring of 1972 in four schools representing a wide range of school situations: low-income Spanish-speaking inner-city, low-income Black inner-city, lower-middle-income white suburban, and upper-middle-income white suburban (Niedermeyer, 1973). The results of this tryout were encouraging. First, 90 percent of the letters formed by children at the end of the year were rated "fairly legible" or better versus 72 percent

for non-program comparison students in matched schools. (Pretest ratings for the two groups were 23 and 47 percent, respectively.) Second, children in both tryout and comparison classes were administered a Pupil Preference Inventory at the end of the year. Items in the inventory asked children to state how well they liked various writing and non-writing activities in the normal curriculum. As would be expected, there was no difference in the preferences of the two groups of children on the non-writing activities. For writing activities (e.g., writing your name, printing letters, etc.), however, program children indicated a significantly higher preference than comparison children. Third, all tryout teachers indicated they would use the program again and rated the children's overall reaction to the program as "very enthusiastic." Finally, there were no appreciable differences between the handwriting achievement of children from the various socioeconomic levels or ethnic groups. All children learned to print quite well in kindergarten.

In a tryout during 1972-73 which focused on training and installation consideration, (Moncrief & Longo, 1974), posttest scores were obtained from 1,581 children in 68 kindergarten classes representing the total range of school situations, and from 320 children in 11 non-program comparison classes. Again, it was found that over 90 percent of the tryout children learned to print legibly, versus 62 percent of the children receiving the traditional kindergarten curriculum. Pacing data indicated that 80 percent of the classes had completed the two blocks by the end of the school year.

Several revisions were subsequently incorporated into the published version of Blocks 1 and 2 based on the empirical and analytic tryout data. Primarily, materials for the first unit of Block 1 were revised so as to require fewer responses and less time when children are first beginning the program. Also, the vocabulary was simplified and the storylines were rewritten with the more recent SWRL lexicon. The letter sequence was revised slightly so as to more systematically present straight-line, simple letters before curved, more complex letters.

Blocks 3 and 4

An initial version of Blocks 3 and 4 was developed and tested during the 1969-70 school year with 420 first-grade children in 14 classes at five schools (Sullivan, Okada, & Niedermeyer, 1974). The materials consisted of a sequenced set of 64 exercises where the children systematically progressed from selecting single words that completed sentences in cartoon-illustrated storylines, to creating and writing their own complete sentences and paragraphs for an entire illustrated story. This tryout found that when writing a story as a posttest, program children scored significantly higher than non-program comparison students in total number of words (71 words to 25), sentences (9 sentences to 6), correct use of capitals, correct use of ending punctuation, and judged overall quality. In addition, an end-of-program questionnaire revealed that the tryout teachers felt the exercises sustained a high level of pupil interest.

Revisions for 1970-71 consisted primarily of minor changes in the exercises themselves so as to make the difficulty progression even more systematic (Okada & Baker, 1971). The program was used by essentially the same teachers who participated in the 1969-70 tryout. Teacher reaction was positive throughout the year and specific suggestions and comments were obtained in a meeting of the teachers with SWRL staff at the end of the year.

Another tryout of essentially the same materials took place during 1971-72 in eight first-grade classes in four schools (Trithart, Queilmalz & Niedermeyer, 1972). Half of the schools and classes were located in low-income, inner-city areas. Pretest scores showed that both tryout children and comparison children in comparable non-program first grades were equivalent in terms of proficiency levels on the program outcomes. At the end of the school year, posttest results indicated that the tryout children were substantially superior in editing outcomes relating to word spacing, coherency, capitalization, ending punctuation, total number of words, and on overall judged quality, originality and organization. Tryout students were not substantially higher on editing skills related to sentence strings, fragments, and

run-on's. Attitudinal surveys showed a high degree of preference by tryout children toward the program materials. Pacing data, however, showed that fewer than half of the pupils completed or nearly completed the 64 exercises during the school year.

From the 1971-72 tryout, it was concluded that some of the scores were not as high as would be desired because so many children failed to finish the program and because the program contained only incidental, but not direct, instruction on the editing of entire multi-sentence compositions or stories. Some of the revisions formulated from the tryout were to (1) divide the sequence of exercises into five units of 12 lessons each, the last lesson in each unit being a Criterion Exercise, (2) provide more teacher procedures on editing and rewriting, (3) introduce constructed (as opposed to selected) responses earlier in the sequence, (4) provide direct instruction on story planning and organization in the last two units, and, finally, (5) rewrite the exercises entirely with the then new SWRL lexicon, creating a new set of characters for the illustrated story lines.

The revised program, broken into five units containing Criterion Exercises and a new set of story lines, was used in the training/installation tryout during 1972-73 (Moncrief & Longo, 1974; Niedermeyer & Moncrief, 1973). Over 1,500 first graders in 57 classes representing the total range of school situations participated. At the end of the year, teachers scored posttests by rating children's stories according to how well each child's composition matched outcome statements. Ratings were also obtained on 54 comparison children in three non-program classes. On outcomes related to coherency, content, fluency, capitalization, and punctuation, teachers of tryout children indicated the compositions "matched" the outcome all or most of the time for about 50 percent of the children (versus about 25 percent for comparison students) and matched the outcome "over half of the time but not all or most of the time" for about 30 percent of the students (versus about 25 percent for the comparison students). Thus, about 80 percent of the children in the program displayed creditable proficiency on the program

outcomes versus about 50 percent of comparison children. However, pacing data revealed that fewer than half of the children completed the five-unit program by the end of first grade. The tryout data thus pointed in the direction of adjustments of the pacing aspects of the program—when much of the instruction for some of the outcomes is centered in the last unit or two and pupils do not experience the instruction, it is unreasonable to expect highly reliable proficiency on those outcomes.

Based on these tryouts, various additional revisions were incorporated into the published version of the program. Major adjustments included (1) shortening the five unit program into two blocks of two units each, (2) defining the outcomes with greater precision and clarity, (3) adding specific Criterion Exercise scoring procedures and a record sheet, (4) adding specific supplementary instruction procedures for each unit, (5) deleting or rewriting many of the storylines that had been found to be uninteresting or awkward, (6) rewriting and placing in a separate *Activities and Materials Guide* specific teacher procedures for each activity, emphasizing instruction on editing and story planning outcomes, and (7) developing several new types of activities that provide for greater variety within the instructional sequence and that also provide for better instruction on editing and story planning.

Blocks 5-8

Development of Blocks 5 and 6 began in 1970. A series of 25 lessons was prepared and tested in five second-grade classrooms over a 15 week period in the Spring of 1971 (Labeaune, Niedermeyer, & Sullivan, 1971). All of the outcomes assessed in the tryout addressed typical mechanics-related editing skills, for example, capitalization, punctuation, use of quotations, indenting. Substantive aspects of composition were assessed only as a rating of "overall quality." The results indicated that the outcome achievement of tryout children was only a little better than non-program comparison children.

From this tryout, it was learned that (1) more practice would be required on a particular skill than two or three activities and (2) instruction beyond Blocks 3 and 4 (first-grade) was going to depend heavily on teacher implementation, thus necessitating more definitive teacher procedures. Also, the tryout provided a variety of exercise formats for use in subsequent development.

For 1971-72, Block 5 and 6 materials were expanded and revised in several ways (Niedermeyer, 1971). Three units were developed, each containing 11 lesson sheets plus a unit test. The outcomes went beyond punctuation and mechanics to include paragraphing and writing a summarized "plan" for the composition prior to writing it in full. The scope of writing experience was expanded from simple, non-dialogue stories to include letters and stories with punctuated dialogue. Within a unit, a general sequence of activities was developed that proved to be useful throughout subsequent development of the program. Roughly, this sequence suggested that when learning a new skill (for example, how to format a letter), students should first practice selecting instances of the skill, and, finally, constructing or writing their own compositions.

The three units were tested in a single classroom during the Winter and Spring of 1972 (Niedermeyer, Quellmalz, & Trithart, 1972). One classroom, rather than several, was used because many of the outcomes and most of the materials were new, and it was not known how appropriate and usable they would be. Thus, the primary purpose of the tryout was to obtain teacher and pupil comments and observational data in one classroom, so as to identify gross deficiencies or problems with materials and teacher procedures. Procedures systematically conducting and reporting SWRL observations of classroom tryouts were operationalized (Niedermeyer, 1972). End-of-year pupil achievement was only of secondary interest at this point.

At the end of the tryout, teacher comments, staff observations, completed pupil materials, and posttest results provided information for further revision. The most important of these were that (1) requiring written "plans" prior to writing the

complete composition evoked highly negative attitudes from students and was dropped, (2) dialogue punctuation was too difficult and was to be delayed until Blocks 7-8 (third-grade), and (3) teacher procedures were to be more specific and detailed. End-of-tryout posttest data showed acceptable performance levels (75 percent or higher) for capitalization, sentence-ending punctuation, commas, complete sentences, and avoidance of sentence strings, sentence fragments, and run-on's. Scores from a non-program comparison class generally ranged from 10 percent to 50 percent on these same outcomes. Tryout children also wrote considerable longer compositions than comparison children (89 words to 68, and 12 sentences to 5, respectively).

As the Block 5-8 materials improved each year from empirical tryouts, they also progressed on an analytic basis. For 1972-73 the program architecture advanced in the following ways. First, outcomes were formulated to reflect the entire plan, write, edit, and revise sequence that is required in writing. Previous efforts had reflected primarily the mechanical-editing aspects of writing. Also, the materials represented a further attempt to identify useful writing situations to teach besides story writing. The five instructional units for 1972-73 included units on writing descriptions, writing directions telling how to do something, narrating an event chronologically, writing stories, and writing persuasive compositions on given topics.

For each type of writing, outcomes were specified that attempted to define the characteristics or substance of a "good" composition; for example: Plans and writes a "How to. . ." composition that includes all necessary steps for a task in proper sequence, with sufficient detail so as to produce replicable actions by readers. It was felt that outcomes such as this were needed for various types of writing to make it clear to students what had to be done and to provide teachers with the basis for evaluating compositions and showing or telling students how to improve. Defining such outcomes proved to be a difficult task, (which is one reason why, perhaps, most elementary-school composition instruction focuses mostly on mechanics-related

skills) and received considerable attention during the next three years of development prior to publication (Quellmalz, Niedemeycr, & Trithart, 1972). The 1972-73 materials were also improved by writing specific teaching procedures for each activity and placing them on 5-by-8-inch cards.

The revised materials for Blocks 5 and 6 were part of the large-scale K-2 Installation Tryout during 1972-73 (Moncrief & Longo, 1974). Twenty of 52 second-grade classes in the tryout were randomly selected for posttest analysis. Results showed that program children averaged 78 percent achievement across all outcomes and writing types versus 31 percent for children in nine non-program comparison classes.

For 1973-74, Blocks 5 and 6 were revised and Blocks 7 and 8 were developed. Blocks 5 and 6 contained instructional units on descriptions, directions ("How to"), plot-oriented stories, and friendly letters. Blocks 7 and 8 continued units on descriptions, stories and dialogue, persuasion, and summarizing fiction (Trithart & Niedermeyer, 1973).

While these materials were used on a large-scale installation basis from 1973 through 1975, a small development tryout was conducted during 1973-74 to obtain transactional data that would identify necessary final revisions prior to publication (Niedermeyer, 1974). The tryout took place with two second grades and two third grades at a single school located near SWRL in an older, lower-middle income suburban tract of single-dwelling houses. One of the more useful data sources for this tryout, in addition to staff observations and teacher comments, proved to be systematic collection of a random sample of all program-related writing completed by children during the tryout.

As a result of this tryout and as a result of SWRL interaction with the publisher (Ginn and Company) the final version of the program contained many changes and improvements. The more important revisions are described below:

- The materials were organized into Blocks 5-8. (They had previously been known as Levels 3 and 4.)

- The 1973-74 materials contained a fifth review unit at the end of each grade or level. These were found redundant and deleted.

- Previously, teacher procedure cards contained instructions for three sessions or a week's activities. These cards became rather long. In the published program, each of the activities or sessions in a unit has a separate procedure card.

- Many of the outcomes were revised or restated. Examination of children's writing samples from the 1973-74 tryout made it possible to redefine some outcomes more usefully and precisely, to delete unnecessary outcomes, or to add new outcomes.

- "Unit Overviews" were written to inform teachers of the outcomes and rationale for each unit.

- The Criterion Exercise assessment format was changed from a three-point rating scale to a simple "Yes-No" decision as to whether the child's writing met the outcome statement or whether he needed supplementary instruction.

- Detailed supplementary instruction activities and procedures were developed for each outcome.

- Pupil materials for each unit were placed in a booklet, with writing space provided.

- It was found that students could not edit and revise their compositions without explicit instruction and practice. Thus editing lessons were developed, tested, and included in the published program.

- Many substantive changes were made in specific units and activities comprising Blocks 5-8 and may be examined in Niedermeyer, 1974.

Postscript

The results of the program verification cycles for the Composition Program reveal many things, but two or three seem to stand out. First, there has been a consistent pattern of fairly high outcome achievement by tryout children. Recent revisions for the published version are very likely to improve achievement levels even more. Second, achievement data from non-program comparison children has consistently shown that the normal school curriculum does not promote these basic writing skills very well at all. Finally, the SWRL program has attempted to go beyond traditional mechanics-related editing skills to operationalize the content or substance of well-written compositions for a variety of purposes.

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SPELLING PROGRAM

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The program verification of the Spelling Program deliberately lagged that of the Reading Program and Composition Program since many aspects of uncertainty associated with the Spelling Program were being resolved in these tryouts. This made it possible to conduct tryouts uniquely relevant to Spelling using relatively small samples of classes for development economy and focusing on uncertainty matters unique to instruction in Spelling.

Four tryouts have been conducted between 1970 and 1974. All tryout classes were in either the metropolitan Los Angeles area or in the San Diego area. Evaluation techniques included the following: test data (pretests or entry or placement tests, unit tests, end-of-tryout tests), classroom observations, review of completed student materials, teacher interviews, and questionnaires. For one tryout, a SWRL staff member (an experienced elementary school teacher) taught spelling in one of the tryout classes; all of her lessons were taped for later review.

Tryout 1 (Butler, 1971; Schwab, 1971; Cronnell, 1971). The first tryout was conducted for the last four months of the 1970-71 school year in four first-grade classes, which were using an early version of SWRL reading instruction. These classes were matched with four other classes on the basis of pretest data. Posttest data indicated that the experimental classes performed better than the control classes. However, weekly tests indicated that scores on transfer words were much lower than scores on explicitly taught words; they also pinpointed specific spellings

which were difficult and the nature of these difficulties.

Based on this tryout, several revisions were made. Matter was resequenced to separate confusing spellings and to more closely match the SWRL Reading Program. Additional instruction was added for similar sounds whose spellings had been confused and for spellings which were visually confusing. Variations in instructional procedures were introduced for variations in spelling content. While instruction had focused on VC phonograms, errors were found to be on specific vowels and consonants, with most difficulty on vowels; thus instruction was revised to focus on individual sounds and their spellings within the context of whole words. Because transfer skills were weak, more emphasis was placed on specific spellings than on specific words. When new features were added to the program, the five-day schedule was no longer appropriate, so more flexible scheduling was permitted. By using only one day of testing (instead of two), more time was available for instruction and practice; with stronger emphasis on initial instruction, a day for review and remediation could be eliminated. To provide teachers with more information to use in conducting instruction, teacher notes ("Linguistic background") were added to the materials.

Tryout 2 (Cronnell & Mitchell, 1973; Russell, 1973). This tryout was conducted in the fall of 1972 in one school in two first grade classes, one of which was taught by a SWRL staff member.

An entry skills measure was administered which indicated that most students possessed the required reading and writing abilities; it also pointed out problems of visual and auditory discrimination which were emphasized in the ensuing instruction and in revisions.

In an attempt to cover the weak areas of Tryout 1, 10 instructional activities were used for each unit, followed by assessment. Several activities were found to be redundant, so through deletion and combination with other activities, it was found that only five were needed. Teacher materials were found to be too vague, so they were revised to indicate more precisely

the nature of the needed instruction. Because teachers had difficulty in generating appropriate practice items, it was decided to list them in the teacher materials. A variety of exercise types were tried in the student materials; only those which students could do and which most directly practiced the desired skills were retained. Since students frequently became bored or frustrated with long exercises, the exercises were shortened.

The instructional pace was slower than planned; several of the above changes (deletion and consolidation of activities, shortening of student exercises, and deletion of difficult exercise types) were expected to keep the time requirements more reasonable.

Assessment scores indicated that most students had attained proficiency on the program outcomes; supplementary instruction (which was not included) was seen to be needed for some students. Scores on transfer words were much closer to scores on lesson words than they had been in Tryout 1. Error analysis indicated continued *b-d-p* problems, so these spellings were sequenced in alternate Units to allow thorough learning of one spelling before exposure to another similar spelling; vowels were also difficult, so more instructional emphasis was placed on them.

Tryout 3 (Humes, 1973). This tryout was conducted in the last three months of the 1972-73 school year in six kindergarten classes in five schools.

Scores on the entry skills test were found not to be related to tryout success. Since the primary purpose of this test was to assess requisite reading and writing skills, it was decided that such assessment could be left up to the teacher.

Teacher-directed oral exercises were generally successful, especially with a change made in the course of the tryout. Rather than focusing on memory in the spelling of program words, new procedures focused on spelling words by first spelling the sounds within them, (e.g., spelling the first sound, the middle sound, and then the last sound in *pan*; then spelling the whole word). This approach made the spelling task easier and was more closely related to the conceptual basis of the program; it also permitted

less emphasis on specific words and more on the spellings within words, thus extending spelling skills to a larger set of words.

In an attempt to aid the teacher's oral instruction, printed response sheets were provided. Several were arduously time-consuming and were eliminated. The effective ones were not found necessary, but were incorporated into the revised supplementary instruction, which had not previously utilized student materials and consequently was not frequently used.

It was observed that children had difficulty with the order of instruction used: first-last-middle, which reflects an easy-to-difficult hypothesis. Because this order conflicts with natural left-to-right progression, instruction was reordered to a first-middle-last sequence.

Since teacher materials were awkward to handle when printed in booklets, they were put on cards and placed in file boxes. Pictures used in student materials were not always identified correctly, so they were listed on the teacher cards.

A major objective of this tryout was to assess the feasibility and effectiveness of formal kindergarten spelling instruction. The tryout indicated that kindergarten spelling instruction is quite feasible with children who possess the requisite reading and writing abilities. Its effectiveness was confirmed by test scores which were, in the main, higher than those found in the previous two (first grade) tryouts. Revisions in the program considerably alleviated problems found in Tryout 2; as opposed to previous findings, scores for vowels were comparable to those for consonants.

Tryout 4 (Cronnell, 1974). This tryout of several Spelling Program Blocks was conducted during the last half of the 1973-74 school year in 45 K-3 classes in five schools.

In general, teacher and student acceptance was high, and students performed well on assessments. However, test scores, as well as teacher feedback, indicated that upper level students (and teachers) frequently had difficulty at the beginning because they were not familiar with the specific content of previous Blocks. To help alleviate this problem, more information on previous

learning was added to teacher materials, including suggestions and material for review of previous Blocks.

Problems appeared with the dictionary skills instruction: children had difficulty doing some of the tasks for practice. Revisions were made to more closely approximate the skills required (locating words, rather than alphabetizing them) and to remove some particular difficulties.

In Blocks 1 and 2, word flashcards were provided. Few teachers used them because it was difficult to handle two at a time. Since it is easier to write on the board than to handle cards, they were deleted.

Most teachers elected not to teach spelling in kindergarten because they felt that their students were not ready, especially since many students did not possess the required writing ability. To permit easier kindergarten use, the first Block was split in two: a new Block 1 covering only consonants and requiring no writing skills; a new Block 2 covering both consonants and vowels to spell whole words and requiring writing skills.

While many teachers completed a whole Block during the half year of the tryout, some completed only 3-5 units. To help teachers better plan their instructional time, suggestions were made concerning the number of sessions needed to complete each activity.

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EXPRESSIVE LANGUAGE PROGRAM

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The development history of the Expressive Language Program can most conveniently be presented chronologically. Tryout data are presented in summary form. Those interested in seeing the complete data or in examining in detail the procedures and materials used in the tryouts will want to refer to the journal article and SWRL papers referenced throughout.

1970-71

The initial version of the Drama and Public Speaking Program (as the program was called until 1974) consisted of 20 kindergarten and 20 first-grade lessons with activities organized around four areas: pantomime, improvisation, extemporaneous speaking, and play production. For each of these areas, from four to seven outcomes were formulated. (For example, in improvisation, where children act out a given story, one of the outcomes was "The child used lines that followed the story.") Instructional procedures for each lesson were contained on 5 by 8 cards so that the teacher could refer to them during the activity. The activities were not conceived as seat work, but rather as exercises in which pupils, working as a class or in small groups, move and perform in a comfortable, stimulating environment. From a pool of 14 kindergartens and 13 first-grades in two middle-income urban districts, seven classes at each grade level were randomly selected to test the initial version of the program, starting in early January of 1971. The remaining classes served as non-program comparison groups.

One of the more difficult development aspects of the Expressive Language Program concerned methods of evaluation. For this tryout, a posttest was developed to assess the program's outcomes. During the posttest, the teacher asked a sample of randomly selected children to perform a task from one of the four outcome areas, while a trained SWRL observer sat in the back of the room and rated performances on the outcomes stated for each area. (When conducting a posttest, the SWRL rater had not been told whether the class was a tryout class or a comparison class.) A five-point rating scale was used (5 = excellent, 4 = good, 3 = fair, 2 = poor, 1 = very poor or no performance).

Average ratings for kindergarten tryout children were generally "fair" on pantomime outcomes, "good" on improvisation outcomes, but between "poor" and "fair" on extemporaneous speaking. (Play production was not assessed in kindergartens.) Comparison kindergarteners were rated between "very poor" and "poor" on almost all outcomes (Niedermeyer & Oliver, 1972).

Average first-grade ratings of tryout children were between "fair" and "good" for pantomime, extemporaneous speaking, and improvisation, and between "good" and "excellent" for play production. Comparison group ratings were significantly lower in all areas except extemporaneous speaking.

Additional data sources revealed that (1) both teachers and pupils enjoyed the program very much (96 percent of the children stated they liked the activities), (2) pacing was slow (only one kindergarten and one first grade completed all 20 of the once-a-week lessons), and (3) teachers displayed a wide range of abilities to provide constructive suggestions and models for children. Also, teachers offered many useful lesson-specific suggestions for program revisions.

The overall revisions resulting from the tryout were to (1) provide more practice on extemporaneous speaking, (2) provide better teacher training and instructional procedures, and (3) revise lessons so that children saw correct models of a performance and then tried once more to emulate that model,

rather than simply "moving on" after one attempt at a particular pantomime, improvisation, etc. (Niedermeyer, 1971).

1971-72

For 1971-72, the above-listed general revisions plus revisions of specific lessons were carried out with Blocks 1 and 2 (kindergarten), and the number of lessons was increased from 20 to 30. Instruction with these program materials was conducted in eight kindergarten classes in three schools (two low-income, inner-city schools and one middle-income, suburban school).

Block 3 and 4 materials were not revised but were used again in six first grade classrooms in a similar combination of schools.

Also, 30 lessons were developed for Blocks 5 and 6 and tested in two second grades at a single middle-income, suburban school during the spring of 1972. These materials were designed to extend the children's abilities in the four program areas. Pantomime activities progressed to characterization. Improvisation activities required children to work from only a "brief story idea", rather than a detailed, teacher-narrated story. Extemporaneous speaking activities included persuasive talks and debates. (These had been tried in first grade the previous year, but proved to be too difficult.) In play production activities, children were introduced to scripting their own plays by completing unfinished scripts.

During the tryout, SWRL observations of selected lessons at all grade levels were conducted and documented using a standard observation protocol (Niedermeyer, 1972). In addition, the 1970-71 posttest was revised at the kindergarten level so that the classroom teacher could make the performance ratings (Niedermeyer & Giguere, 1972). Posttesting was conducted only in kindergarten, since Blocks 3 and 4 had not been revised and Blocks 5 and 6 were first-round materials being tried out in only two classes.

Results of Block 1 and 2 posttesting showed that the children in the middle-income, suburban school performed even better than children from similar schools the previous year. Kindergarten children in the two low-income, inner-city schools,

however, were substantially lower for extemporaneous speaking and improvisation outcomes (but not for pantomime outcomes).

Pacing was generally slow, as it had been the previous year. None of the kindergarten classes completed the 30 lessons, with the average being 22. Also, while children in all classes showed a high degree of enthusiasm toward the program, some kindergarten and first grade teachers in the low-income, inner-city schools expressed a concern about the "readiness" or "maturity" of many of their children for the "speaking activities" (extemporaneous speaking and improvisation). Teachers at the suburban school however, felt just the opposite, and were able to produce good speaking performances from their children.

The data revealed that several inner-city kindergarten or first-grade teachers had kept many of their "immature" or "non-verbal" children out of the program. Also, at least two of the teachers withheld extemporaneous speaking and improvisation lessons from their classes, and taught only pantomime activities. Thus it was unclear whether performances of inner-city kindergarteners were low because the children were unable to master the outcomes or because teacher expectations prevented the children from receiving necessary instruction and practice. For 1972-73, it was decided to address this problem through the Teacher's Guide and teacher training by providing specific teaching procedures for so-called "low verbal" children and by helping teachers accept a responsibility to provide all children opportunities to participate in all parts of the program.

Other revisions resulting from the 1971-72 tryout included (1) development of a systematic K-6 sequence of activities for developing skills of creating stories and writing plays, (2) deletion of several types of activities that proved ineffective (e.g., "chain stories"), (3) structuring improvisation stories so children initially act out "sentence groups" instead of single sentences, (4) adding dramatic interpretation activities, developing a "program architecture" (Niedermeyer, Oliver, & Kalins, 1972).

1972-73

For 1972-73, lesson specifications were formulated for

Blocks 7 and 8 (third grade) of the program (Niedermeyer, Kalins, & Oliver, 1972). Blocks 1 and 2 were slightly revised, Blocks 3 and 4 were revised and expanded to 30 weekly lessons of three sessions each, and Blocks 5 and 6 were revised. Posttests were developed for Blocks 1 through 6. Teacher training materials and procedures were revised and elaborated, and included the development of a film. The K-2 materials were then used in a large-scale installation tryout during the 1972-73 school year (Moncrief & Longo, 1974). Approximately 55 kindergartens, 25 first grades, and 12 second grades representing a wide range of school situations participated.

Pacing data revealed that teachers generally scheduled only two instead of the recommended three sessions per week. Also, 30 percent of the kindergartens and only 10 and 15 percent of the first and second grades completed the program.

Posttest results indicated that first-grade children received acceptable teacher ratings close to 80 percent of the time. Kindergarten and second-grade children received such ratings approximately 70 percent of the time. During this tryout, an evaluation was also conducted on the teacher training film for the program (McMorris, 1973).

In addition to the large-scale installation tryout during 1972-73, a smaller development tryout was conducted during the spring of 1973 in 33 kindergartens in eight low-income, inner-city schools (Niedermeyer & Fischer, 1973). The purpose of the tryout was to obtain greater clarity about problems of teacher expectations and program difficulty levels that arose during the 1971-72 tryout.

Fourteen extemporaneous speaking and improvisation lessons were tested, i.e., all lessons required children to talk. At the end of the tryout, most of the teachers felt the materials were too difficult or not appropriate for their children.

One of the necessary revisions immediately indicated from this tryout was to remove extemporaneous speaking and play production from Blocks 1 and 2. Teachers' reactions and SWRL observations were convincing that kindergarten children are not

yet ready to speak in front of a group or read scripted materials. The revised kindergarten activities focused on pantomime and uncomplicated improvisation. All improvisation stories were shortened and simplified. Also, additional procedures were formed explaining how teachers should deal with children thought to be "shy" or "low-verbal."

1973-74

The program (Blocks 1-8) used on a large-scale basis in 1973-74 contained the following major revisions. First, a set of six outcomes (non-verbal expression, vocal expression, fluency, planning, verbal content, and evaluation) were formulated. Each level of the program was then divided into four units, with a Criterion Exercise at the end of each unit to assess any of the six program outcomes relevant to that particular unit. Suggestions for supplementary instruction after each unit were provided. The program training film was completely revised so as to help teachers better evaluate childrens performances and offer specific suggestions for improvement. Teacher training was also revised to help teachers plan and schedule the program's activities in order to complete the program by the end of the school year.

Results of large-scale testing during 1973-74 showed that program teachers, at the end of the school year, consistently rated approximately 80 percent of the children as displaying acceptable proficiency across all outcomes and all blocks (Hanson, Behr, & Bailey, 1975).

Revisions Based on the 1973-74 Tryout

A few of the major revisions are described below.

- Specific instructional outcomes were finalized for each unit in each block. The previously defined six outcomes that covered all eight blocks were insufficient because they did not allow for the increase in skill and content complexity from block to block.
- The rating scale used in previous Criterion Exercises was altered so that teachers simply mark a "Yes/No" decision for each child according to the outcome statement and

additional criteria and examples provided. Children receiving a "No" on any outcome receive supplementary instruction.

- The supplementary instruction procedures for each unit were completely revised and now contain detailed activities and content for teachers and aides to use.
- All activities in each block were edited and revised; some were rewritten entirely.
- Instructional tapes were developed for many activities to provide appropriate vocal models for the children.
- At the suggestion of teachers, many more illustrated story posters were added to improvisation lessons to help motivate children and to help them better plan their improvisations.
- The notion of three-session "weekly" teacher procedure cards was dropped. For each unit in the final program, an activity may require from one to four sessions, depending on the activity. All procedures for an activity are contained on a single card.

Since its inception in 1970, the Expressive Language Program has been modified through extensive classroom tryout and revision, from a small set of loosely organized activities into a comprehensive, instructionally effective system for teaching oral language and expressive skills to primary grade children.

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TRAINING/INSTALLATION SYSTEM

Michael H. Moncrief

The development of comprehensive, quality-verified instructional systems involves not only the instructional programs but also procedures for training instructional personnel in program use and for installing these programs in a specific district. During early development of such programs, the developing agency may handle these training and installation tasks. As development progresses and programs are tried out on a large scale in preparation for general distribution, responsibility for these tasks must be transferred to the districts. This transfer of training and installation responsibilities is necessary if the districts are to develop their own capability for effective, ongoing use of the programs without an overdependence on outside assistance. The developing agency, however, must develop materials and procedures to enable districts to meet these responsibilities. At SWRL, these materials and procedures constitute the Training/Installation (T/I) system developed to accompany each instructional program.

T/I systems identify specific tasks and provide resources that enable administrative and supervisory personnel to take a more definitive and active role in working with instructional personnel to accomplish these tasks and ensure successful program operation. Areas addressed by the T/I system include: systematic proficiency-referenced pupil placement, the logistics of materials processing and organization, program planning and scheduling.

and user orientation and training. It also aids users in conducting quality assurance activities to credit instructional accomplishments achieved through program use and to plan future instructional improvements. System configurations provide the exportability and reliability needed to meet the unique installation requirements of each school district.

When tryouts of SWRL instructional programs advance beyond the component level, a T/I system is developed to accompany these programs. During 1973-74, a year-long multilevel (K-3) tryout was conducted that included three SWRL Communication Skills Programs: Reading, Composition, and Expressive Language (formerly called Drama and Public Speaking). The 1974-75 tryout was expanded to include the Spelling Program. This document describes the development and components of the T/I system used during these tryouts.

DEVELOPMENT OF THE 1973-74 T/I SYSTEM

The development of the T/I system involved five phases: (1) identification of system constraints, (2) identification of school and district tasks and training objectives, (3) development of the T/I system components, (4) tryout, and (5) system revision.

Identification of System Constraints

System constraints are those factors that help to define a realistic and potentially effective system within the environment in which the system is intended to operate. The early identification of system constraints is important to effective development efforts in that they affect the assumptions that can be made concerning such areas as the time frame in which the system must operate, personnel resources available for operating the system, and types of media that can be used.

SWRL has gained considerable experience in identifying system constraints during the development of T/I systems for other instructional programs. However, since the 1973-74 Communication Skills Programs tryout was the first multilevel, multiprogram tryout for which exportable training was devel-

oped, the structure of the system and the constraints imposed upon its design varied from those of previous SWRL training systems. The constraints identified as applicable to the 1973-74 T/I systems were based on previous SWRL experience with single program tryouts, an examination of the school environment in which the system was expected to operate, the expected effects of large scale program tryouts, and the limits imposed when programs are at various stages of development. Thus, the 1973-74 T/I system was designed to meet the following constraints:

1. To function in a variety of school situations without direct assistance from or contact with SWRL.
2. To be flexible enough to accommodate any combination of programs and levels that might be selected by a given district.
3. To be amenable to cost-effective revision for subsequent tryouts when training would be expanded to include extended versions (grades 4-6) of the instructional programs.
4. To stress the commonalities in terminology and procedures among programs without being overly repetitious.
5. To minimize the probability of information overload during any training component, particularly teacher training.
6. To minimize training/installation time requirements and responsibilities to accommodate typical time constraints of school and district personnel. (Previous SWRL training systems had required approximately one-half day of user time for each year of instruction in a content area. Similar time requirements for this multilevel, multiprogram tryout would have been unrealistic in terms of available user time.)
7. To accommodate the audiovisual resources typically available to users.

Identification of School and District Tasks and Training Objectives

After the major purposes and constraints of the T/I system were identified, an analysis was conducted to determine the tasks required of school and district personnel for the successful

installation and operation of this multilevel, multiprogram tryout. The teacher and coordinator tasks were then organized into training objectives. This task analysis and specification of training objectives delineated: (1) what instructional personnel needed to know or do to implement each instructional program, and (2) what district and school coordinators needed to know or do to carry out their tasks.

The major tasks required of instructional personnel (i.e., teachers, aides, tutors) to operate the instructional systems and obtain program outcomes were divided into two categories: instructional practices and classroom management procedures. Instructional practices refer to the pedagogical procedures used during the presentation of the lesson and include such tasks as:

1. Focusing children's attention.
2. Informing the learner(s) of what is expected.
3. Providing appropriate models.
4. Providing appropriate and frequent individual and group response opportunities.
5. Using a positive approach to corrective feedback.
6. Acknowledging accomplishments.

While these pedagogical procedures needed to be briefly reviewed and their importance brought to the attention of instructional personnel, the time devoted to them during SWRL training was minimized because (1) these procedures are generally learned during formal university training and (2) the procedures are built into SWRL instructional materials and procedures.

Teacher tasks of concern included classroom management procedures essential to operating SWRL programs. An analysis of these procedures resulted in the identification of eight classroom management tasks applicable to all SWRL instructional programs:

1. Checking to see that a complete set of instructional materials has been received.
2. Assigning all pupils to appropriate levels of the program using placement aids or placement guidelines.

3. Establishing and maintaining an instructional schedule for all pupils or groups.
4. Providing instruction for all pupils as specified in program materials.
5. Administering and scoring the Criterion Exercises (en route assessment).
6. Providing supplementary instruction where indicated.
7. Completing record sheets and transmitting them to the program coordinator at designated intervals.
8. Administering and scoring end-of-year assessment.

Tasks required of supervisory personnel (i.e., the Tryout Coordinator) to successfully install the Communication Skills Programs and maintain program operation were also identified. These include:

1. Determining material needs for each school.
2. Ordering materials.
3. Processing materials (i.e., reception, storage, and distribution of program and training materials).
4. Planning and scheduling teacher training.
5. Conducting teacher training.
6. Helping teachers make placement decisions.
7. Helping teachers establish instructional schedules and integrate SWRL programs into the existing curriculum.
8. Conducting follow-up training.
9. Monitoring program progress.
10. Providing for community support (i.e., informing parents, educators, and community members about the programs).
11. Coordinating tryout participation activities.

Development of the T/I System Components

The next step in the T/I system development process was to design and develop exportable components that would enable school and district personnel to perform the identified tasks within the constraints previously described. Four major components, or types of materials, were identified: coordinator materials, teacher training materials, teacher manuals, and train-

ing follow-up materials.

After the T/I system components were identified, the elements, or specific materials used in each component, were defined and developed. The media included print materials, filmstrip/audiotapes, and films. These media provided the exportability and flexibility required of the T/I system and accommodated the audiovisual resources typically available to users. A listing of the components and corresponding elements that comprised the 1973-74 T/I system is presented in Table 1.

Coordinator Materials. Coordinator materials consisted of an Installation Guide and a Tryout Coordinator Manual. Organized according to the major tasks involved in implementing SWRL programs, the Installation Guide was intended to assist school personnel in developing an installation plan that would meet both program and district requirements.

The tasks addressed in the Guide included (1) identifying the Tryout Coordinator(s) for each district, (2) completing the Non-Exclusive License (NEL) tryout agreement and ordering materials, and (3) setting up plans for materials processing and teacher training.

The Tryout Coordinator Manual contained the information supervisory personnel needed for planning, scheduling, and conducting the teacher training session(s). A modularized training guide was included that outlined the training procedures and materials needed for any combination of programs a trainer might have presented. The Manual also summarized the procedures and materials needed for conducting training follow-up sessions.

The Installation Guide was sent to each district coordinator and participating school principal in May, 1973 so that they could use it in planning for the 1973-74 tryout. The Tryout Coordinator Manual was distributed at the beginning of the school year in sufficient quantities so that either the District Tryout Coordinator or building-level staff could conduct teacher training.

Table 1

Components and Elements of the 1973-74
CSP T/I System

Components	Element (Media)
Coordinator Materials	Installation Guide (print)
	Tryout Coordinator Manual (print)
Teacher Training Materials	"SWRL Instructional Programs Overview" (filmstrip/audiotape)
	"Introduction to the SWRL Reading Program" (filmstrip/audiotape)
	"SWRL Drama and Public Speaking Program" (film)
	"SWRL Composition Skills Program Overview" (filmstrip/audiotape)
	Program Summary Sheets for each program (print)
	Data Collection Activities Sheet (print)
Teacher Materials	Teacher Manuals for each program (print)
Training Follow-up Materials	SWRL Training Follow-up Guide (print)
	SWRL Program Planning Guide (print)
	Program Completion Folder (print)
	"Program Scheduling: Training Follow-up I" (filmstrip/audiotape)
	"Checking Program Progress: Training Follow-up II" (filmstrip/audiotape)

Teacher Training Materials. Training materials consisted of those audiovisual and print elements for use by district personnel or a school coordinator in conducting group meetings with instructional personnel prior to actual use of the instructional program(s). These materials served to: (1) present classroom personnel with program outcomes, organization, materials, and activities and their tasks in installing, operating, and maintaining the program(s); (2) demonstrate district and school commitment to the program(s) by allocating time and resources to the system; and (3) provide teachers and other classroom personnel with initial motivation to use or assist in using the program(s).

Teacher training materials included program-general and program-specific elements. The program-general element consisted of a filmstrip/audiotape that described how SWRL programs were developed and provided information on the terminology, instructional procedures, and classroom management activities common to all the programs. It also provided general information on how SWRL programs operated in the classroom. The general element was intended for presentation at all training sessions regardless of the particular programs being used by the districts.

Program-specific audiovisual elements included filmstrip/audiotapes and a 16mm film. Each element provided teachers with the major outcomes, organization, materials, activities, and procedures of a particular program. The teachers viewed only the audiovisual elements related to the program(s) they would be using.

Four- to eight-page Program Summary Sheets accompanied each of the program-specific audiovisual elements. Each sheet summarized program outcomes, organization, placement guidelines, materials, procedures, activities, and instructional time requirements. The materials and procedures section clarified how to initiate and conduct instruction. Program Summary Sheets served as (1) an advance organizer to the corresponding program filmstrip or film, (2) a take-home study sheet to help in recalling information presented during initial training, and (3) a public

information booklet to provide parents, community members, and other interested groups with basic information about a particular program.

Initial training materials, in themselves, did not provide extensive training in program procedures, but rather provided the information needed to prepare teachers to initiate program use. Since teachers are generally familiar with the procedures involved in operating instructional programs, the emphasis in these materials was in providing the information needed to orient users to these particular programs and to answer initial questions on how to get started. These materials were not intended, however, to present teachers with all the information needed to operate the program(s). Information and procedures unique to a level of a program or to a particular type of instructional material not used throughout a program were to be obtained by referring to the self-instructional teacher materials before instruction began.

Several factors contributed to this approach to initial training. The system had to operate within the previously defined constraints. This included being adaptive to various school situations and the time typically available for conducting such initial training sessions. Training on program procedures was limited, in part, because it was felt that the teaching of general instructional procedures is mainly the domain of teacher education agencies and other staff development efforts, rather than a program-specific T/I system. Also, concise directions for using program materials are built into the programs at those points at which they will most likely be needed. Another factor limiting the scope of these initial training sessions is the need for experience with a program to provide a meaningful context for more specific suggestions and training. (This experience itself often tends to provide the training needed for successful and effective program operation.)

The initial training materials are not intended to function in isolation nor do they represent all of the "training" provided in proper use of the T/I system. Both training follow-up materials and the district trainers are expected to complement and enhance

the effectiveness of the initial training materials. The training follow-up sessions bring teachers together after they have had some experience with the programs so that they can discuss questions and share ideas related to programs. These follow-up sessions also suggest ideas and procedures that may be used to increase program effectiveness. The trainer using the materials, whether the Tryout Coordinator or school-level staff, must take responsibility for adapting and extending training sessions to meet the needs of each particular group; this includes providing demonstrations of program use under conditions similar to those teachers could expect in their own situations. The initial teacher training materials used in combination with other parts of the T/I system provide the basis for comprehensive program-specific training that is adaptive to the needs of each user.

Teacher Manuals. Teacher manuals for each program were included as part of the training materials since their main purpose was to enable instructional personnel to operate the programs. These manuals were also viewed as "back-up" self-study training materials for those situations in which teachers did not attend training sessions.

Each teacher manual described program outcomes and organization, scheduling considerations, instructional materials and procedures, and suggestions for using tutors or aides.

Training Follow-up Materials. These materials helped ensure that program outcomes were attained and that each program was completed on time. Materials were provided for conducting two training follow-up sessions.

Training Follow-up I assisted teachers in determining curricular priorities and integrating SWRL programs into the curriculum by establishing weekly and yearly schedules (i.e., establishing unit completion dates). Materials used to accomplish these tasks included a guide for use by the coordinator or school principal in conducting follow-up sessions, a filmstrip/audiotape "Program Scheduling: Training Follow-up I," and the SWRL Program Planning Guide and Program Completion Folder. The session provided teachers the opportunity to ask questions, discuss

concerns regarding the operation of SWRL programs, and review filmstrips presented during initial training. Follow-up I was to be conducted by supervisory personnel within the first two weeks of school.

Training Follow-up II was designed to assist teachers in maintaining program progress. During this follow-up session, coordinators reviewed program progress and helped teachers determine whether their schedules would lead to program completion. Suggestions for maintaining unit completion schedules were offered. Materials used during this session included a filmstrip/audiotape, "Checking Program Progress: Training Follow-up II," and the Program Completion Folders. As before, teachers could discuss any questions regarding the operation of SWRL programs and view selected training filmstrips.

TRYOUT AND REVISIONS

The 1973-74 Tryout of the Communication Skills Programs and T/I system involved 293 schools in 22 districts in 4 states.

Procedures

Use of the Training/Installation system during a tryout is an ongoing process. There are, however, some key events that indicate how well the system has been implemented and how well it is operating. These include trainer training, teacher training, and training follow-up sessions. Data were collected at each of these points through reaction sheets (questionnaires) and SWRL staff observations of a sample of teacher training and follow-up sessions. Additional data sources included classroom observations and informal discussions with district coordinators. As part of each district's responsibilities in the tryout, each district sent a coordinator to SWRL for a one-day trainer training session. The reaction sheets collected from district trainers immediately following trainer training provided an indication of the degree to which district trainers felt prepared to conduct teacher training. Trainer comments and suggestions relative to the training materials and procedures were also solicited.

The observations and reaction sheet data collected at teacher

training sessions were intended: to identify the various conditions in which these sessions were conducted and what factors affected system effectiveness, to identify what questions teachers had after attending training, and to solicit the suggestions of both teachers and trainers for improving T/I materials and procedures. Data collected after the training follow-up sessions were intended: to evaluate the effectiveness of such sessions, to identify the conditions under which these sessions were conducted, and to obtain user reactions on the instructional programs and T/I system after they had experience in program use.

Results

Trainer Training Session (Trainer Reactions). Reaction sheets were completed by 85 district trainers immediately after training at SWRL. Eighty-eight percent of these trainers reported that they felt prepared to train others to conduct teacher training, while 92 percent indicated that they felt prepared to train teachers.

When asked for specific comments related to improving training, trainers indicated that more time was needed because of the large amount of information covered (19).* Trainers felt that they needed to examine the training materials prior to the training session (19). Six trainers thought the session should contain more active participation. A variety of other suggestions involved the training agenda such as requesting morning and afternoon breaks or putting follow-up training first.

Teacher Training Sessions. Teachers and trainers were asked to complete reaction forms after initial teacher training sessions.

Teachers were asked to suggest ways training could be improved. Of the 638 teachers who returned reaction sheets, 184 indicated that materials should be sent to schools prior to training and the opening of school. Teachers (40) also suggested

*Numbers in parentheses indicate frequency of response.

that a demonstration of instructional procedures be included during training.

A number of teachers were concerned about packaging of instructional materials. Instructional materials are typically packaged to include enough material for one teacher and 30 pupils. Many teachers (68) felt there should be materials for more than 30 pupils in each classroom set. Other teachers (17) suggested packaging pupil materials in smaller packets (e.g., 10 sets per packet).

Additional concerns related to instructional materials and procedures and placement procedures. Such concerns involved, for example, the correlation between the placement test and placement in program blocks (5), the use of the programs in multigrade classrooms (3), and grouping procedures (2).

Trainers also completed reaction sheets after conducting the training sessions. Fifty-five reaction sheets were received, with some trainers submitting more than one sheet. In describing the conditions under which training was conducted, the trainers indicated that they usually trained teachers from one school at each session and that most training sessions (83 of 106) were conducted during September and the first half of October. Typically, the number of teachers attending each session ranged from six to 15. Most sessions (78) varied in length from 30 to 90 minutes. Fifteen sessions required two hours to complete, while 12 sessions ran as long as three hours. Trainers indicated that most teachers attended from one to three training sessions (other than follow-up training). Eight trainers indicated that their teachers did not attend any training sessions. Thirty out of 57 training sessions were conducted as after-school sessions. Twelve were conducted as full-day sessions and 10 were conducted as half-day sessions. The remaining five were conducted prior to the opening of the school.

Commenting on training materials and procedures, trainers suggested that classroom materials be sent prior to training and program initiation (25). They felt the printed and audiovisual materials used during teacher training were all well done (10).

but suggested that training should be more active (2).

In addition to reaction sheets, data were collected from SWRL staff observations of training sessions in seven schools, with at least two observations of the training for each program. These observations supported and elaborated on the descriptive information and suggestions provided in the reaction sheets. Observers noted that in some cases training was not presented as outlined in the Trainer's Guide. For example, some trainers either did not go over the Summary Sheets or passed over them too quickly. It was suggested that Summary Sheets should be made an integral part of training and that they could be used to help support the audiovisual presentations. They also commented that the Coordinator Manual should be made more explicit, especially the section on Data Collection. These observations also revealed that teachers were concerned because often they had not received program materials. This lack of program materials also limited the trainers' opportunities to expand the session beyond showing the audiovisual training materials and discussing the Summary Sheets.

Training Follow-up. SWRL staff observed four follow-up sessions. These observations and subsequent communications with district coordinators indicated that follow-up sessions were conducted by a variety of personnel (district coordinators, principals, reading specialists, etc.) and that the sessions were most likely to occur when conducted by someone at the school level. While teachers did not spend a lot of time discussing pacing or performance (the topics presented in the follow-up filmstrips), they did have an opportunity to discuss concerns about program operation and to share ideas. Some of the trainers suggested that the filmstrip on program scheduling be shown at the initial teacher training session. One of the main concerns of teachers during these follow-up sessions was the late delivery of materials that caused a subsequent delay initiating program use.

Reaction sheets were also sent to teachers and school coordinators in late November. These forms were intended to obtain user reactions to the programs and training follow-up

sessions after the programs had been in use for a few weeks.

Teacher reaction sheets were distributed on a sampling basis to selected schools in seven districts. The choice of districts and schools was based on district size, geographic location, socio-economic status, ethnic population, and SWRL programs used. Responses from approximately 100 teachers were solicited. Sixty-six teachers returned reaction sheets.

Information was requested on the number and adequacy of training follow-up sessions teachers attended. Forty of the 66 teachers indicated that they had attended a follow-up training session on program scheduling and 38 indicated they had attended a follow-up session on checking program progress. Fifty teachers felt that the Program Planning Guide was helpful in establishing a Program Completion Schedule. Teachers suggested that follow-up sessions could be improved by: describing programs in greater detail (3), providing demonstrations (2), revising the filmstrip (2), and providing sample materials.

Teachers were also asked to indicate what additional information would have been helpful before starting the programs. The most frequent recommendation (18 of 41) was that materials be available prior to training. Four teachers requested a longer training session earlier in the year. Four wanted a more detailed explanation of program operation. The majority of the remaining recommendations dealt with instructional program materials such as a test correction booklet for Reading.

School coordinator reaction sheets were sent to all districts in the tryout. The primary purpose for soliciting school coordinator reactions was to obtain suggestions relative to follow-up training sessions. In addition, suggestions were requested for improving teacher training and additional assistance from SWRL that would have helped the school coordinator fulfill his responsibilities. Reaction sheets were received from 60 school coordinators.

Of these 60 coordinators, 56 indicated that they conducted teacher training in their schools and 33 reported that follow-up sessions had been conducted. Seventeen coordinators said they had conducted only one follow-up session and 14 said they

conducted two follow-up sessions. Four indicated that more than two follow-ups had been conducted. The rest did not respond to this question. Twenty-one coordinators indicated that teachers in their school had established program completion schedules while 20 coordinators said their teachers had not. Thirteen coordinators did not know if their teachers had established program completion schedules.

Concerning instructional materials, 38 coordinators stated that sufficient and appropriate instructional materials were not ordered. The two most frequent reasons for improper material orders were the "invalid" placement test (18) and "improper" packaging (16). Coordinators said that most classes had 32 or 33 students but program materials were packaged in sets of 30.

Coordinators were asked to indicate questions or concerns teachers had during the first few weeks of program use. Coordinators (29) noted that teachers were very concerned with procedures for integrating programs into a demanding schedule. Coordinators also indicated that teachers were concerned with the late arrival of program materials (19), the record keeping which they felt was excessive (5), and packaging of materials (5).

School coordinators also provided suggestions for improving teacher training. The most frequent suggestion was that materials be available prior to teacher training (19 responses). Eleven coordinators suggested that the filmstrip presentations should vary because they are too repetitive. Six coordinators requested more information on instructional procedures to be included. Two trainers requested a demonstration of materials and procedures. In suggesting topics they felt should be covered during follow-up training sessions, 13 coordinators felt that a workshop using sample materials would be appropriate. They also felt more direction was needed for: diagnosing pupil strengths and weaknesses in Expressive Language (2), fitting lessons into daily instructional time (1), procedures for grouping (1), and using the programs (2).

Classroom observations and communications with coordinators generally supported and elaborated on the descriptive

information and suggestions obtained through reaction sheets and training observations. These discussions and observations tended to yield more definitive suggestions as to what revisions should be made in the T/I system. They also indicated that many of the initial user questions on such topics as placement, grouping strategies, classroom management, and organization of materials were resolved or minimized after the programs had been in use for a few weeks. However, the solution to these questions varied based on each unique situation.

These observations suggest that, since the T/I system is designed for all potential program users, it is difficult to provide specific procedures in these areas that would serve the needs of all districts. Instead, it is more effective to provide flexibility in the programs and T/I system so that users can adopt, adapt, or develop those procedures that best fit their particular needs and situations.

Revisions

Revisions in the T/I system for use during 1974-75 were based on the 1973-74 evaluation results, program modifications, and the addition of Spelling to those programs ready for year-long tryout. The major revisions included:

- Expanding the Installation Guide to provide more specific suggestions on program placement, ordering procedures, and materials processing. Specific suggestions and sample forms were provided to facilitate materials distribution.
- Expanding the Tryout Coordinator Manual to provide more specific suggestions on program management, such as how to organize for instruction, deal with materials distribution, and determine proper placement levels. More detailed suggestions for conducting training sessions were also provided.
- Moving Training Follow-up I to the initial training session. This change was based on user requests to provide teachers with guidelines for scheduling and integrating SWRL programs into the curriculum before beginning instruction.

- Replacing the filmstrip/audiotape, "SWRL Instructional Programs Overview," with a film that showed each of the Communication Skills Programs in classroom use.
- Adding a Spelling training filmstrip and Program Information Booklet, as this was the first year Spelling was involved in a year-long tryout.
- Adding the filmstrip, "Conducting SWRL Reading Instruction," to provide demonstrations of specific program procedures, such as how to use the A&M Guides and how to teach decoding skills.
- Adding a General Characteristics filmstrip that described those attributes common to all Communication Skills Programs that promote effective instruction and efficient learning.
- Updating Tryout Participation Activities. These were simplified so that data requirements mainly consisted of completing and returning only two forms, the SWRL Program Participation Sheet and the SWRL Program Record.
- Changing Summary Sheets to Program Information Booklets and providing more detailed procedures for using these booklets during training so that they become an integral part of the training sessions, rather than just a "hand-out" sheet. Some of the filmstrip presentations referred teachers to sample materials or information provided in the Information Booklets. The Information Booklets were designed to complement the audiovisual presentations for each program.
- Revising the Teacher Manual for Reading to provide a more comprehensive illustrated discussion of program procedures and materials, especially the A&M Guide.
- Incorporating the Follow-up Trainer Guide into the Tryout Coordinator Manual for ease in handling. A list of discussion questions was added to facilitate open-ended discussion among teachers during the Training Follow-up session(s).
- Emphasizing that trainers should conduct initial training after teachers have received program materials. This allows teachers to examine program materials before or during

training and avoids the learning loss that may occur if training takes place long before instruction begins.

DESCRIPTION OF THE 1974-75 T/I SYSTEM

The basic purposes and user tasks addressed by the 1973-74 T/I System were unchanged for 1974-75. The major components, i.e., Coordinator, Training, Teacher, and Training Follow-up Materials, remained the same. Specific elements were revised as indicated in the previous section. Thus, the 1974-75 Communication Skills Programs T/I System consisted of those components and elements shown in Table 2.

Training for the Communication Skills Programs was organized into a series of nine modules. Eight modules were used during initial training and one module was used during follow-up training. The general title, purpose, and time requirements of each are shown in Figure 1.

Module 1 was an introductory module which addressed the characteristics and commonalities of the Communication Skills Programs. The remaining modules were classified into two groups: Program-Specific Modules and Program-General Modules. There was one Program-Specific Module for each program: Reading, Spelling, Composition, and Expressive Language. These modules addressed the specific outcomes, organization, materials, and procedures associated with the respective programs. Each Program-Specific Module also provided a demonstration of how to conduct a lesson for that program.

The Program-General Modules presented topics common to all SWRL Communication Skills Programs. Module 9, Checking Program Progress, discussed procedures for maintaining program completion schedules. It was used during Follow-up Training approximately six weeks after initial teacher training.

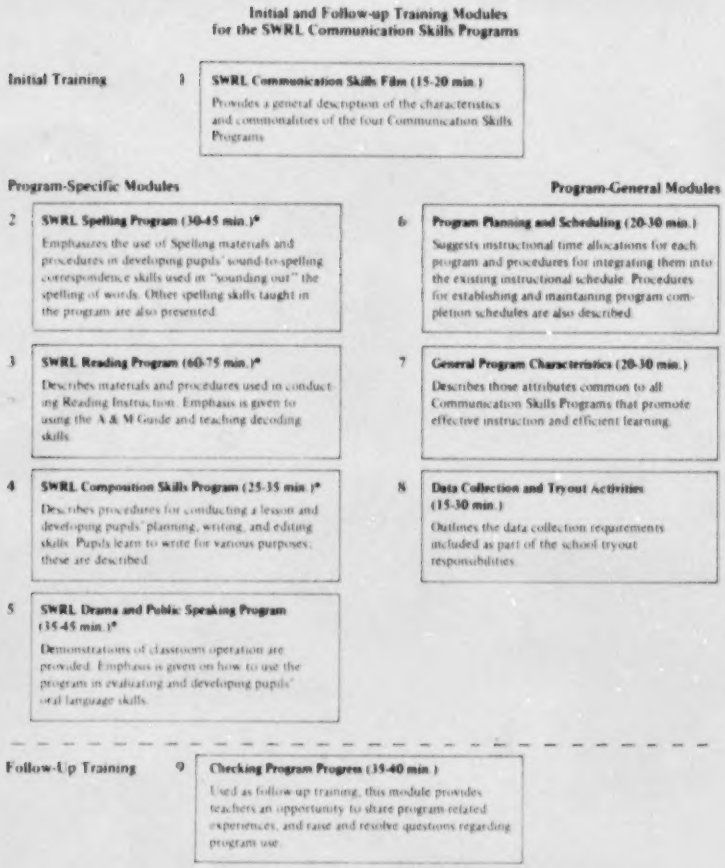
The films, filmstrips/audiotapes, and print materials used in these modules were intended to provide the exportability and reliability needed to ensure that trainers were able to conduct effective training sessions within the minimum amount of preparation time usually available to them.

Table 2

Components and Elements of the 1974-75
CSP T/I System

Components	Elements (Media)
Coordinator Materials	Installation Guide (print)
	Tryout Coordinator Manual (print)
Teacher Training Materials	"SWRL Communication Skills Programs" (film)
	"SWRL Spelling Program" (filmstrip, tape, and script)
	"Introduction to the SWRL Reading Program" (filmstrip, tape, and script)
	"Conducting SWRL Reading Instruction" (filmstrip, tape, and script)
	"SWRL Composition Skills Program – An Overview" (filmstrip, tape, and script)
	"SWRL Drama and Public Speaking Program" (film)
	Program Information Booklets for each program (print)
	SWRL Program Planning Guide (print)
	"Program Scheduling" (filmstrip, tape, and script)
	"SWRL Communication Skills Programs: General Program Characteristics Summary Sheet" (print)
	"SWRL Communication Skills Programs: General Program Characteristics" (filmstrip, tape, and script)
Teacher Materials	Teacher Manuals for each program (print)
Training Follow-up Materials	Tryout Coordinator Manual, sections on Training Follow-up (print)
	"Checking Program Progress: Training Follow-up (II)" (filmstrip, tape, and script)

Figure 1. Training modules for the SWRL Communication Skills Programs


Initial and Follow-up Training Modules
for the SWRL Communication Skills Programs
Initial Training
1 SWRL Communication Skills Film (15-20 min.)
Provides a general description of the characteristics and commonalities of the four Communication Skills Programs.
Program-Specific Modules
Program-General Modules
2 SWRL Spelling Program (30-45 min.)*
Emphasizes the use of Spelling materials and procedures in developing pupils' sound-to-spelling correspondence skills used in "sounding out" the spelling of words. Other spelling skills taught in the program are also presented.
3 SWRL Reading Program (60-75 min.)*
Describes materials and procedures used in conducting Reading Instruction. Emphasis is given to using the A & M Guide and teaching decoding skills.
4 SWRL Composition Skills Program (25-35 min.)*
Describes procedures for conducting a lesson and developing pupils' planning, writing, and editing skills. Pupils learn to write for various purposes; these are described.
5 SWRL Drama and Public Speaking Program (35-45 min.)*
Demonstrations of classroom operation are provided. Emphasis is given on how to use the program in evaluating and developing pupils' oral language skills.
6 Program Planning and Scheduling (20-30 min.)
Suggests instructional time allocations for each program and procedures for integrating them into the existing instructional schedule. Procedures for establishing and maintaining program completion schedules are also described.
7 General Program Characteristics (20-30 min.)
Describes those attributes common to all Communication Skills Programs that promote effective instruction and efficient learning.
8 Data Collection and Tryout Activities (15-30 min.)
Outlines the data collection requirements included as part of the school tryout responsibilities.
Follow-Up Training
9 Checking Program Progress (35-40 min.)
Used as follow-up training, this module provides teachers an opportunity to share program-related experiences, and raise and resolve questions regarding program use.

*The length of each program-specific module will vary according to the time needed to discuss program materials and teacher questions.

DISCUSSION

Ongoing Development

Development of the T&I system, like that of the instructional programs, is an ongoing process that not only continues through the program tryouts, but extends into the marketing stage where the programs are distributed by the publisher. The 1974-75 CSP T/I system is currently being tried out in 24 districts in 5 states, with over 300 classes participating. Subsequent revisions are expected to accommodate these tryout results and to reflect changes necessary to provide smooth program implementation under the conditions imposed by commercial distribution.

Implications for General System Development

While the production of Training/Installation materials is an ongoing process, the steps taken and experience gained thus far in working with the multilevel, multiprogram T/I system have implications for general systems development. The purpose of a Training/Installation system is to identify the functions of various district and school personnel in coordinating, implementing, and maintaining the instructional system and to provide the resources needed to perform these functions. Functions to which the system must attend include: program planning and scheduling, the logistics of materials processing and organization, orientation and training of school personnel, pupil placement, and coordinating ongoing program progress.

Teacher training is one of the main functions of a T/I system. The resources provided to help accomplish this task should include materials for both initial and follow-up training sessions. The initial training sessions provide the impetus for initiating program use. At a minimum, these sessions must provide the basic information needed to orient staff to the programs so they feel prepared to begin instruction. Where possible they should include demonstrations of the programs in classroom use. These materials, however, are limited by some of the constraints described previously. They must be flexible so that training can

be adapted to meet various user needs or school situations and to accommodate any combination of programs a district may select. The comprehensiveness and complexity which can be designed into these initial training sessions is limited by the amount of time usually available to conduct them and by the lack of user experience with the programs. More user training experience with the programs is needed to provide a meaningful context for in-depth training in specific program materials and procedures. The initial training materials are not intended to function in isolation, nor do they represent all of the "training" provided in proper use of the T/I system. Training follow-up sessions serve, in part, to complement initial training. These follow-up sessions bring teachers together after they have had some experience with the programs so they can discuss questions and share ideas related to the program. These follow-up sessions also suggest ideas and procedures that may be used to increase program effectiveness and provide opportunities for more in-depth training in any area in which teachers may have questions.

One of the key features of an effective T/I system is exportability. That is, the system must be designed so that district and school personnel can use the resources provided to accomplish the specified function without direct assistance from the developing agency. Installation of a new program or instructional change often falters when extensive support is initially provided and then withdrawn. An exportable system develops districts' own capabilities to implement and operate new programs on an ongoing basis. The SWRL T/I materials and procedures provide a convenient and efficient means for school and district personnel to successfully introduce, coordinate, and operate the Communication Skills Programs.